NATIONAL COMMUNICABLE DISEASE CENTER

Morbidity and Mortality

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WEEKLY REPORT

Week Ending July 1, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL

CONTENTS

EPIDEMIOLOGIC NOTES AND REPORTS

NOSOCOMIAL ISOLATIONS OF *CLOSTRIDIUM PERFRINGENS* – Oregon

Three cases of postoperative gas gangrene due to *Clostridium perfringens* occurred on the surgical wards of a moderate-size hospital in Oregon between April 22 and May 9, 1967. One patient died as a result of the infection. Only one or two cases of gas gangrene had occurred at this hospital in each of the past 5 years.

The index case was a 57-year-old Mexican male diabetic who underwent cholecystectomy on April 21, 1967. The gallbladder was opened during surgery; *Cl. perfringens* was subsequently cultured from the contents. Fifteen hours after surgery the patient became febrile and developed marked icterus, tachycardia, and leucocytosis. He remained septic for the next 2 days despite massive antibiotic therapy with chloramphenicol and penicillin. Shortly before death on April 24, crepitation was noted along the right thoracic wall. *Cl. perfringens* and *E. coli* were cul-

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CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	26th WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 26 WEEKS		
	JULY 1, 1967	JULY 2, 1966	1962 - 1966	1967	1966	MEDIAN 1962 - 1966
Aseptic meningitis	39	43	38	888	765	727
Brucellosis	8	2	6	133	102	169
Diphtheria	–	3	3	52	79	136
Encephalitis, primary:						
Arthropod-borne & unspecified	29	27	- - -	663	652	- - -
Encephalitis, post-infectious	18	26	- - -	466	456	- - -
Hepatitis, serum	38	30	598	1,022	653	21,448
Hepatitis, infectious	650	506		19,785	16,962	
Malaria	31	6	3	994	149	44
Measles (rubeola)	694	2,718	6,803	54,521	178,678	335,226
Meningococcal infections, total	23	40	39	1,403	2,329	1,599
Civilian	23	35	- - -	1,299	2,070	- - -
Military	–	5	- - -	104	259	- - -
Poliomyelitis, total	–	13	6	11	26	44
Paralytic	–	12	3	9	24	33
Rubella (German measles)	894	599	- - -	36,864	38,484	- - -
Streptococcal sore throat & scarlet fever	4,952	4,791	4,573	276,715	264,510	244,442
Tetanus	5	4	8	90	71	115
Tularemia	8	2	7	75	72	122
Typhoid fever	6	7	7	188	156	183
Typhus, tick-borne (Rky. Mt. spotted fever)	10	10	11	90	82	75
Rabies in animals	63	70	73	2,297	2,251	2,248

NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax	2	Rabies in man	–
Botulism	–	Rubella, Congenital Syndrome	6
Leptospirosis	18	Trichinosis: Colo.-1, NYC-2	40
Plague	–	Typhus, murine: Texas-1	19
Psittacosis: Mont.-1	23	Polio, Unsp.	2

NOSOCOMIAL ISOLATIONS OF *CLOSTRIDIUM PERFRINGENS* – Oregon

(Continued from front page)

tured from the wound, the wound drain, and from lung tissue at autopsy.

The second case was a 66-year-old male who had previously undergone bilateral amputation of the lower legs for arteriosclerosis. On April 26, an additional portion of his right thigh was removed because of progressive vascular ischemia. At this time, the skin flaps were left open. The patient became incontinent postoperatively and contaminated the open wound with feces. A culture of the wound on April 30 revealed *Cl. perfringens, Streptococcus fecalis,* micrococcus, and *Proteus species*. On May 2, he became febrile and crepitation appeared around the wound edge. He survived the infection after disarticulation of the right hip and massive penicillin therapy.

The third patient was a 47-year-old chronic alcoholic woman who underwent surgery for small bowel obstruction on May 8. The evening after surgery she developed fever and abdominal guarding, and the next day was noted to have an erythematous, indurated abdominal wall with crepitation. The patient was transferred to another hospital where she recovered from the infection following therapy with antibiotics and hyperbaric oxygen. A fecal fistula was later discovered between the anterior abdominal wall and the large bowel.

Epidemiologic investigation followed closure of the operating area from May 10 through 16 for cleaning and disinfection. The autoclaves had been operating properly, and no contamination of instruments, disinfectant solutions, or gloves could be demonstrated. *Cl. perfringens* was isolated from nearly three-fourths of the environmental cultures taken throughout the hospital during the investigation. Consistently larger numbers of clostridia were recovered from cultures taken on the west side of the hospital where excavation and construction had been in progress for several months. The climate had been unusually dry and the hospital was allegedly very dusty during the epidemic period.

Cross infection on the ward was considered unlikely, but could not be definitely excluded. Only two of the three patients were present on the same ward concomitantly, and the first of these patients died 8 days before the appearance of gas gangrene in the second. Despite the high degree of contamination in the environment with *Cl. perfringens*, the most likely source for these three infections was considered to be endogenous microorganisms.

(Reported by Dr. Edward L. Goldblatt, State Epidemiologist, Oregon State Board of Health; and an EIS Officer.)

RECOMMENDATION OF THE PUBLIC HEALTH SERVICE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

The Public Health Service Advisory Committee on Immunization Practices meeting on May 26, 1967, issued the following recommendations regarding influenza immunization and control in the civilian population.

INFLUENZA – 1967-68

Influenza Prospectus – 1967-68 – United States

During the winter and spring of 1966-67, the influenza reported in the United States was limited to minor outbreaks and individual cases. Type A2 influenza virus was recovered only from several small outbreaks in the eastern States. Type B virus was identified in the Southwest, particularly in California and Arizona. Excess mortality attributed to pneumonia and influenza did not reach the national "epidemic threshold" at any time, and it did not remain elevated for more than a single week in any of the country's geographic divisions.

No significant antigenic changes were demonstrated in the relatively few strains of type A2 influenza virus recovered during the year in the United States and abroad. Type B strains were similar to those isolated in the 1965-66 season but did not show antigenic differences from earlier type B strains.

The relatively little disease caused by A2 influenza viruses in the 1966-67 season permitted the general level of susceptibility to increase, particularly in the eastern States where the last major outbreaks of A2 illness were observed in 1964-65. Thus, substantial numbers of cases of A2 influenza can be expected to occur during the 1967-68 season, especially in the eastern part of the country. Because in 1965-66 and 1966-67 most areas of the United States experienced type B influenza caused by strains related to those still prevalent, no significant amount of type B infection is likely to occur in the coming year.

Influenza Viruses and Vaccine Formulation

Influenza viruses are known to undergo continual antigenic change. Minor variations, as discerned by laboratory procedures, occur frequently. Moderate changes can result in increased numbers of influenza cases, presumably on the

basis of the population's heightened susceptibility to the variant. Major antigenic shifts occur infrequently. When they do, they may produce widespread or even pandemic disease. The most recent major type A influenza virus variant is the A2 (Asian) strain which appeared in 1957.

The protection afforded by a particular influenza vaccine antigen, like that conferred by natural infection, is directed primarily against the same or similar infecting strains. This relationship has been most easily observed at the time of major antigenic shifts, although the relative effectiveness of vaccines may also be reduced when less marked changes occur.

During the 25 years since development of inactivated influenza vaccines, the appearance of three major antigenic variants emphasize the need for regular up-dating of vaccine formulations. When A1 influenza virus appeared in the United States in 1947, vaccine containing only A antigen gave very little protection. Similarly, marked ineffectiveness of type A1 antigen was observed in 1957 when the A2 strain appeared; and when an essentially distinct strain of type B influenza virus appeared in 1954, vaccines containing the previous type B strains were no longer satisfactory.

In general, it has been recognized that the relative effectiveness of influenza vaccine depends on the degree of similarity between strains incorporated in the vaccine and the viruses prevalent in the community. Yearly review of epidemiologic and laboratory data on vaccines and prevalent viruses is required to ensure that the proposed vaccine formulation is suitable for the next year's forecast.

Influenza Vaccines – 1967-68

Two influenza vaccine formulations will be available for use in the 1967-68 season. A newly introduced bivalent vaccine containing only contemporary A2 and B strains is for general use to provide greater protection against current strains of influenza. The traditional polyvalent vaccine incorporates older strains (types A and A1) as well as newer A2 and B antigens in order to stimulate a broader immunologic response. The older strains do not play a significant role against the currently prevalent viruses.

Both the bivalent and polyvalent vaccine formulations contain the same total quantity of influenza antigens – 600 chick cell agglutinating (CCA) units. This limit is set in order to minimize the frequency of local and systemic reactions. The bivalent vaccine includes considerably greater representation of contemporary A2 and B strains than is possible in polyvalent vaccine which retains A and A1 antigens. Bivalent vaccine should provide greater protection against current strains of influenza than has previously been possible.

The A2 strains included in both vaccine formulations are the same as were used in 1966-67. Because of antigenic changes in prevalent type B strains, however, B Maryland 1/59 has been replaced by B Massachusetts/3/66.

Bivalent (A2 and B Strains) Influenza Virus Vaccine–1967

Type	Strain	CCA Units per ml
A2	Japan/170/62	150
	Taiwan/1/64	150
		300
B	Massachusetts/3/66	300
Total		600

Polyvalent (A,A1,A2, and B Strains) Influenza Virus Vaccine–1967

Type	Strain	CCA Units per ml
A	PR/8/34	100
A1	Ann Arbor/1/57	100
A2	Japan/170/62	100
	Taiwan/1/64	100
		200
B	Massachusetts/3/66	200
Total		600

Vaccine Usage

Annual influenza immunization is not currently indicated for all individuals, but should be given to persons in groups known to experience high mortality from epidemic influenza. In particular, immunization with bivalent vaccine is recommended for persons in older age groups and for all individuals with chronic illnesses such as those discussed below:

Chronically Ill

Persons of all ages who suffer from chronic debilitating diseases including cardiovascular, pulmonary, renal, or metabolic disorders; in particular:

1. Patients with rheumatic heart disease, especially with mitral stenosis.
2. Patients with such cardiovascular disorders as arteriosclerotic heart disease and hypertension, especially showing evidence of frank or incipient cardiac insufficiency.
3. Patients with chronic bronchopulmonary diseases such as asthma, chronic brochitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema, or pulmonary tuberculosis.
4. Patients with diabetes mellitus and Addision's disease.

Older Age Groups

During major influenza outbreaks, especially those caused by type A viruses, increased mortality has regularly been recognized in persons over 45 years of age and even more notably in those over 65. This association has been particularly marked when underlying chronic illnesses were also evident.

RECOMMENDATION OF THE PUBLIC HEALTH SERVICE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

(Continued from page 211)

Persons in Institutions

Patients residing in nursing homes, chronic disease hospitals, and comparable environments should be considered at particular risk since their living arrangements may allow greater spread of disease once an outbreak has been established.

Some increased mortality was observed among pregnant women during the 1957-58 influenza A2 epidemic both in this country and abroad. Subsequently, there has been no indication of increased risk. Routine influenza immunization during pregnancy is not recommended unless the individual also falls into one of the "high risk" categories noted above.

Physicians contemplating general vaccination programs for industrial, school, and other such groups must weigh the expense of the programs against the likelihood of extensive illness. When widespread epidemics of influenza are forecast, officials responsible for maintaining community services are justified in recommending the use of influenza vaccine in selected adult groups if above-average levels of absenteeism would disrupt satisfactory operations.

Dosage and Schedule

Persons Not Vaccinated Since July 1963

Persons who require immunization and have not been vaccinated since July 1963 should receive a primary immunization series of bivalent vaccine. The primary series consists of an initial subcutaneous dose, followed by a second, two months later. It may be noted that even a single dose can afford some protection. A second injection as early as two weeks after the first one will enhance the antibody response.

Immunization should begin as soon as practicable after October 1 and ideally should be completed by early December. It is important that immunization be carried out before influenza occurs in the immediate area, because there is a two-week interval between vaccination and maximal development of antibodies.

Summary

Adults and children 10 and older
1.0 ml subcutaneously on two occasions as specified above.

Children 6 to 10 years*
0.5 ml subcutaneously on two occasions as specified above.

Children 3 months to 6 years*
0.1-0.2 ml of vaccine given subcutaneously on two occasions, separated by one to two weeks followed by a third dose of 0.1-0.2 ml about two months later.

Persons Vaccinated After July 1963

Only a single booster of bivalent vaccine at the dosage level specified for the primary series is necessary for individuals requiring immunization who have been vaccinated as recently as July 1963. This booster dose is best given in early December, before the onset of the anticipated influenza season.

For those in older age groups who have previously experienced undue reactions to influenza vaccine, a booster dose of 0.1 ml given by careful intracutaneous injection can be expected to induce an antibody response which is somewhat comparable to that induced by the 1.0 ml subcutaneous dose. The intracutaneous route is not recommended, however, in other circumstances.

Contraindication

Since the vaccine viruses are propagated in eggs, the vaccine should not be administered to anyone who is hypersensitive to eggs or egg products.

*Since febrile reactions in this age group are common following influenza vaccination, an antipyretic may be indicated.

ANNUAL SURVEILLANCE SUMMARY
POLIOMYELITIS – 1966

The final total of paralytic poliomyelitis cases reported to the National Communicable Disease Center during 1966 is 102 cases. This total is based on the "best available paralytic case count," that is, cases with known residual paralysis at 60 days and those reported initially as paralytic poliomyelitis but on which no 60-day final report has been received. A 60-day followup surveillance form was submitted in 1966 for all but 2 of the 102 cases. Although the 1966 total is 41 cases more than were reported for 1965 and 11 cases more than the 1964 total, it is the third lowest national total on record. The contrast of the reported cases for the past 3 years with those for 1961-1963 is evident in Figure 1.

The geographic distribution of the paralytic poliomyelitis cases is shown in Figure 2. Of the 102 cases, 66 occurred in the type 1 poliovirus epidemic in southern Texas. This outbreak, one of the largest in recent years, involved primarily unimmunized preschool children of low socioeconomic background. An additional two cases were in children who had onset of illness in other states, but

Figure 1
PARALYTIC POLIOMYELITIS, 1961-1966
CASES BY WEEK OF ONSET

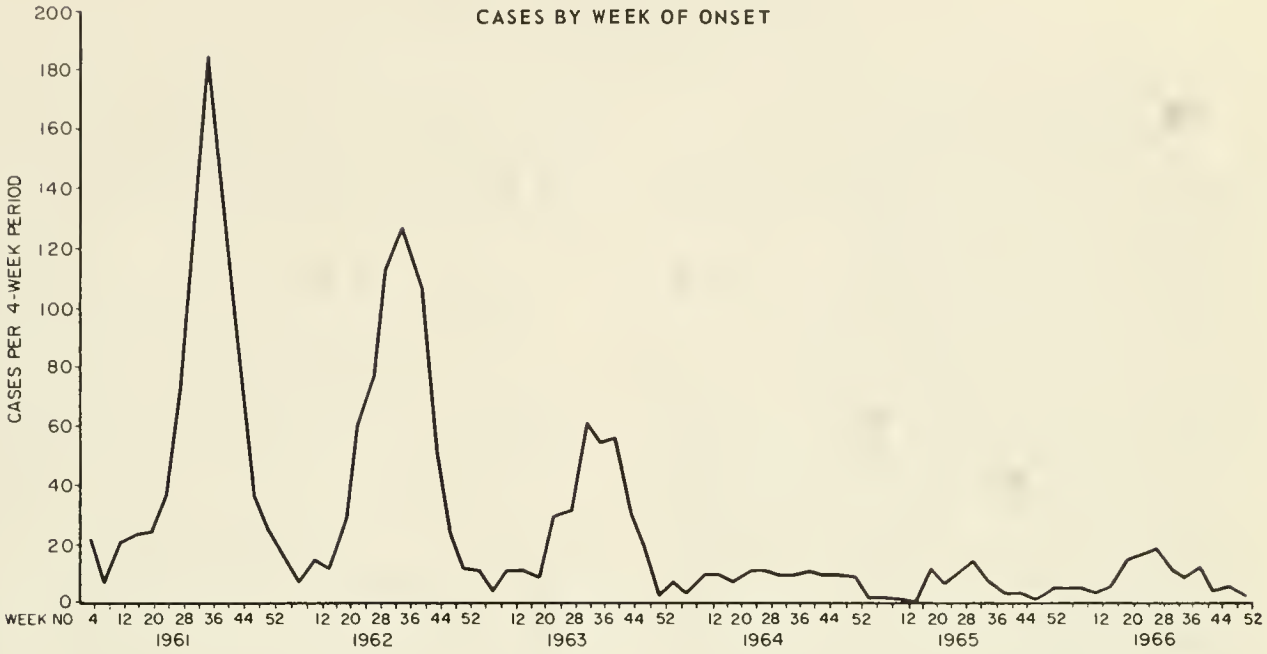


Figure 2
PARALYTIC POLIOMYELITIS, 1966
102 CASES BY COUNTY, UNITED STATES

POLIOMYELITIS – 1966

(Text continued from page 212)

were thought to have acquired their disease while in the epidemic areas of Texas and Mexico.

The 36 "non-Texas" cases were widely distributed among 20 states. Only one county, Los Angeles County in California, reported as many as three cases. Two cases were reported from only two counties, King County in Washington, and Cook County in Illinois.

The incidence of paralytic poliomyelitis increased during the months of May, June, and July, as shown by week of onset in Figure 3. This was due primarily to the epidemic in Texas which began in April and reached a peak in July. Texas cases declined in the fall but did not disappear. The 36 cases which occurred outside Texas were spread throughout the year without a summer peak.

Over 75 percent of the paralytic poliomyelitis cases were in children less than 5 years of age. In Table 1 the cases are listed by age and sex. Seven deaths were attributed to poliomyelitis.

The poliovirus type was identified in 51 of the 66 Texas cases and in 27 of the 36 "non-Texas" cases. The breakdown of poliovirus types is listed in Table 2.

As shown in Table 3, 21 of the 36 "non-Texas" cases and 53 of the 66 Texas cases were in children who had never received any polio vaccine. Only seven children were considered adequately immunized. Two Texas cases, both in unvaccinated children, had had household contact with children who had recently received oral vaccine.

Five cases of paralytic disease occurred in oral vaccine recipients and were considered "vaccine-associated cases." This entity is defined as those cases occurring in individuals living outside an epidemic area, with onset of illness between 4 and 30 days after administration of oral poliovirus vaccine, and with residual paralysis at 60 days. These persons acquired a paralytic illness at intervals of 9 to 28 days after receiving oral vaccine. One illness followed a single dose of monovalent type 1 vaccine, one followed a single dose of monovalent type 3 vaccine, and the remaining three followed doses of trivalent vaccine. Strain characterization studies identified the only isolate studied as "vaccine-like."

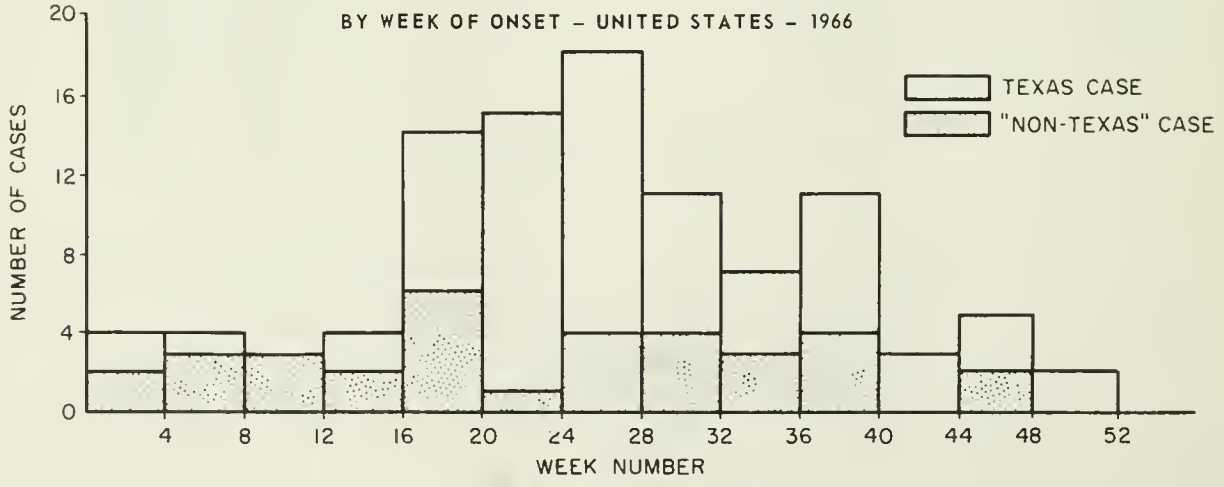
Table 1
102 Reported Cases of Paralytic Poliomyelitis
By Age Group and Sex
United States – 1966

Age Group	Male	Female	Total	Deaths
0-4	50	29	79	5
5-9	5	5	10	1
10-14	1	2	3	0
15-19	1	0	1	0
20-29	2	1	3	0
30-39	5	0	5	1
40+	1	0	1	0
Total	65	37	102	7

Table 2
Poliovirus Types in Texas and "Non-Texas" Cases
United States – 1966

Cases	Type			Mixed or Unknown Type	Total
	1	2	3		
Texas	48	2	1	15	66
"Non-Texas"	12	11	5	8	36
Total	60	13	6	23	102

Figure 3
102 REPORTED CASES* OF PARALYTIC POLIOMYELITIS
BY WEEK OF ONSET – UNITED STATES – 1966



* WEEK OF ONSET UNKNOWN FOR ONE "NON-TEXAS" CASE.

Table 3
Immunization Histories of 102 Reported Cases of Paralytic Poliomyelitis
United States – 1966

Vaccine	Number of Cases			Number of Cases with Adequate Primary Immunization*		
	Texas	Non-Texas	Total	Texas	Non-Texas	Total
No vaccine	53	21	74	0	0	0
IPV alone	4	3	7	0	1	1
Mono OPV alone	3	6	9	1	3	4
Mono OPV + IPV	0	2	2	0	1	1
Tri OPV alone	5	4	9	0	0	0
Tri OPV + IPV	0	0	0	0	0	0
Mono + Tri	1	0	1	1	0	1
Total	66	36	102	2	5	7

*Adequate primary immunization considered:
4 doses of IPV for all ages
3 doses of monovalent OPV for children and adults
2 doses of trivalent OPV for all ages
3 doses of monovalent OPV plus one dose of trivalent OPV for infants

An additional four cases of paralytic illness occurred in family or close community contacts of vaccinees in 1966. Three of these cases occurred in adults between 20 and 30 years of age, and the intervals between administration of vaccine and onset of illness in the contacts were 14, 23, and 24 days. Isolates of type 2 poliovirus were made in each of these 3 cases. The fourth case was in a 2-year-old child in contact with a neighbor who had received type 1 poliovirus vaccine 21 days previously. Strain characterization studies identified the isolates as "vaccine-like" in each instance.

(Reported by the Neurotropic Viral Diseases Unit, Epidemiology Program, NCDC.)

INTERNATIONAL NOTES
QUARANTINE MEASURES

PHILIPPINES – International Certificates of Vaccination or Revaccination Against Smallpox and Cholera

American citizens planning travel to or through the Philippines are alerted that their International Certificates of Vaccination or Revaccination Against Smallpox and Cholera must be up to date, complete in detail and bear the "approved stamp". Otherwise they will be subject to vaccination against smallpox on arrival in the Philippines, and to vaccination against cholera if they visit a country infected with cholera before arriving in the Philippines. The traveler will be subject also to vaccination against cholera on departure since the disease is endemic in the Philippines. There is a fee for vaccination.

International Certificates of Vaccination must bear the "approved stamp" prescribed by the health administration of the country in which the vaccination is performed. In the United States it is generally the stamp of the local or state health department. The traveler is urged to review his itinerary and to comply with the requirements before he leaves the United States if he wishes to avoid delay, revaccination or possible detention.

MEXICO AND USA – Smallpox Vaccination Requirements

The Public Health Service was advised that Mexico discontinued the requirement of a smallpox vaccination certificate for persons entering that country from the United States on June 19, 1967, provided they had visited no other countries other than the United States or Mexico within 14 days prior to crossing the border.

RELOCATION OF FOREIGN QUARANTINE PROGRAM

On June 22, 1967, the Foreign Quarantine Program was moved to the National Communicable Disease Center at 1600 Clifton Road, N.E., Atlanta, Georgia 30333. (Telephone: Area Code-404, 633-3311).

Under the reorganization of the Public Health Service, effective January 1, 1967, the Foreign Quarantine Division became a program of the National Communicable Disease Center, Bureau of Disease Prevention and Environmental Control.

Dr. Arthur S. Osborne, Medical Director, is Chief of the Program, and Dr. John H. Hughes, Scientist Director, is Deputy Chief.

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
JULY 1, 1967 AND JULY 2, 1966 (26th WEEK)

AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			
					Primary including unsp. cases		Post-Infectious	Serum		Infectious	
	1967	1966	1967	1967	1967	1966	1967	1967	1966	1967	1966
UNITED STATES...	39	43	8	-	29	27	18	38	30	650	506
NEW ENGLAND.....	-	-	-	-	-	1	-	1	-	31	24
Maine.....	-	-	-	-	-	-	-	-	-	3	6
New Hampshire.....	-	-	-	-	-	-	-	-	-	1	1
Vermont.....	-	-	-	-	-	-	-	-	-	1	-
Massachusetts.....	-	-	-	-	-	1	-	-	-	8	8
Rhode Island.....	-	-	-	-	-	-	-	-	-	9	1
Connecticut.....	-	-	-	-	-	-	-	1	-	9	8
MIDDLE ATLANTIC.....	7	2	2	-	4	2	3	13	16	101	90
New York City.....	2	-	-	-	1	1	-	3	12	21	21
New York, up-State.	1	-	-	-	-	-	2	1	2	37	34
New Jersey.....	1	1	-	-	3	1	-	3	1	14	12
Pennsylvania.....	3	1	2	-	-	-	1	6	1	29	23
EAST NORTH CENTRAL...	9	2	-	-	10	5	5	1	2	83	57
Ohio.....	1	-	-	-	6	3	-	-	-	20	9
Indiana.....	2	-	-	-	2	-	-	-	-	6	4
Illinois.....	1	2	-	-	-	-	2	-	1	21	18
Michigan.....	5	-	-	-	1	1	3	1	1	30	23
Wisconsin.....	-	-	-	-	1	1	-	-	-	6	3
WEST NORTH CENTRAL...	1	1	1	-	1	1	-	-	2	54	26
Minnesota.....	1	-	-	-	-	-	-	-	-	9	4
Iowa.....	-	1	1	-	-	1	-	-	-	2	8
Missouri.....	-	-	-	-	-	-	-	-	2	39	9
North Dakota.....	-	-	-	-	-	-	-	-	-	-	-
South Dakota.....	-	-	-	-	-	-	-	-	-	-	1
Nebraska.....	-	-	-	-	-	-	-	-	-	1	-
Kansas.....	-	-	-	-	1	-	-	-	-	3	4
SOUTH ATLANTIC.....	-	2	-	-	3	5	3	-	-	53	66
Delaware.....	-	-	-	-	-	-	-	-	-	1	3
Maryland.....	-	-	-	-	2	-	1	-	-	17	11
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	-	-
Virginia.....	-	-	-	-	-	1	1	-	-	9	15
West Virginia.....	-	1	-	-	-	-	-	-	-	2	5
North Carolina.....	-	-	-	-	-	3	-	-	-	8	7
South Carolina.....	-	-	-	-	-	-	-	-	-	-	1
Georgia.....	-	-	-	-	-	-	-	-	-	10	6
Florida.....	-	1	-	-	1	1	1	-	-	6	18
EAST SOUTH CENTRAL...	4	9	-	-	-	3	1	-	-	47	26
Kentucky.....	1	-	-	-	-	-	-	-	-	13	6
Tennessee.....	1	3	-	-	-	1	1	-	-	19	11
Alabama.....	1	-	-	-	-	-	-	-	-	2	-
Mississippi.....	1	6	-	-	-	2	-	-	-	13	9
WEST SOUTH CENTRAL...	7	8	4	-	3	1	1	1	1	67	43
Arkansas.....	-	-	1	-	-	-	-	-	-	-	4
Louisiana.....	2	-	1	-	2	-	-	1	1	11	7
Oklahoma.....	1	-	1	-	-	-	-	-	-	1	-
Texas.....	4	8	1	-	1	1	1	-	-	55	32
MOUNTAIN.....	-	-	1	-	4	-	-	-	-	26	17
Montana.....	-	-	1	-	-	-	-	-	-	3	-
Idaho.....	-	-	-	-	-	-	-	-	-	2	4
Wyoming.....	-	-	-	-	-	-	-	-	-	-	1
Colorado.....	-	-	-	-	4	-	-	-	-	10	6
New Mexico.....	-	-	-	-	-	-	-	-	-	3	3
Arizona.....	-	-	-	-	-	-	-	-	-	8	2
Utah.....	-	-	-	-	-	-	-	-	-	-	1
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	11	19	-	-	4	9	5	22	9	188	157
Washington.....	3	-	-	-	-	2	-	-	-	25	7
Oregon.....	1	-	-	-	-	-	-	-	-	11	9
California.....	7	14	-	-	4	7	5	22	9	152	140
Alaska.....	-	-	-	-	-	-	-	-	-	-	1
Hawaii.....	---	5	---	---	---	-	---	---	-	---	-
Puerto Rico	-	-	-	-	-	-	-	-	-	25	21

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

JULY 1, 1967 AND JULY 2, 1966 (26th WEEK) - CONTINUED

AREA	MALARIA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			POLIOMYELITIS			RUBELLA
			Cumulative			Cumulative		Total	Paralytic		
	1967	1967	1967	1966	1967	1967	1966	1967	1967	Cum. 1967	1967
UNITED STATES...	31	694	54,521	178,678	23	1,403	2,329	-	-	9	894
NEW ENGLAND.....	-	16	773	2,136	-	57	107	-	-	-	161
Maine.....	-	7	228	189	-	3	8	-	-	-	21
New Hampshire.....	-	-	72	65	-	2	9	-	-	-	13
Vermont.....	-	1	42	218	-	-	3	-	-	-	1
Massachusetts.....	-	8	290	743	-	29	42	-	-	-	53
Rhode Island.....	-	-	60	72	-	4	12	-	-	-	7
Connecticut.....	-	-	81	849	-	19	33	-	-	-	66
MIDDLE ATLANTIC.....	5	47	2,039	17,512	9	219	266	-	-	2	174
New York City.....	-	19	387	8,106	-	36	38	-	-	1	30
New York, Up-State.	-	19	461	2,292	2	53	76	-	-	-	142
New Jersey.....	5	4	467	1,823	1	81	74	-	-	-	-
Pennsylvania.....	-	5	724	5,291	6	49	78	-	-	1	2
EAST NORTH CENTRAL...	2	93	4,934	65,108	3	179	367	-	-	-	144
Ohio.....	-	17	1,106	6,135	1	63	97	-	-	-	4
Indiana.....	1	14	564	5,378	-	21	64	-	-	-	9
Illinois.....	1	9	854	11,056	-	43	73	-	-	-	25
Michigan.....	-	12	864	12,866	1	39	99	-	-	-	52
Wisconsin.....	-	41	1,546	29,673	1	13	34	-	-	-	54
WEST NORTH CENTRAL...	1	47	2,713	8,390	-	63	128	-	-	-	13
Minnesota.....	-	1	115	1,613	-	15	31	-	-	-	1
Iowa.....	-	5	730	5,165	-	12	18	-	-	-	4
Missouri.....	-	25	325	512	-	12	51	-	-	-	8
North Dakota.....	-	8	790	987	-	1	7	-	-	-	-
South Dakota.....	-	4	51	38	-	6	4	-	-	-	-
Nebraska.....	-	4	610	75	-	11	8	-	-	-	-
Kansas.....	1	-	92	NN	-	6	9	-	-	-	-
SOUTH ATLANTIC.....	11	108	6,452	14,027	5	269	382	-	-	1	78
Delaware.....	-	2	42	240	-	5	4	-	-	-	2
Maryland.....	6	9	136	2,044	1	33	38	-	-	1	3
Dist. of Columbia..	-	1	21	374	1	10	9	-	-	-	1
Virginia.....	-	66	1,996	1,866	1	28	48	-	-	-	45
West Virginia.....	-	15	1,312	4,879	-	20	12	-	-	-	9
North Carolina.....	5	-	834	368	2	55	95	-	-	-	-
South Carolina.....	-	-	486	612	-	24	44	-	-	-	-
Georgia.....	-	-	29	230	-	43	56	-	-	-	-
Florida.....	-	15	1,596	3,414	-	51	76	-	-	-	18
EAST SOUTH CENTRAL...	1	50	4,903	18,718	-	117	207	-	-	1	35
Kentucky.....	1	22	1,276	4,548	-	34	79	-	-	-	8
Tennessee.....	-	23	1,694	11,661	-	47	68	-	-	-	27
Alabama.....	-	2	1,283	1,563	-	24	42	-	-	-	-
Mississippi.....	-	3	650	946	-	12	18	-	-	1	-
WEST SOUTH CENTRAL...	4	118	16,679	22,686	2	199	340	-	-	5	2
Arkansas.....	-	-	1,400	966	-	25	31	-	-	-	-
Louisiana.....	-	3	146	88	2	80	129	-	-	-	-
Oklahoma.....	4	1	3,312	461	-	13	18	-	-	1	-
Texas.....	-	114	11,821	21,171	-	81	162	-	-	4	2
MOUNTAIN.....	-	99	4,242	11,081	-	25	73	-	-	-	91
Montana.....	-	7	275	1,736	-	-	4	-	-	-	3
Idaho.....	-	2	361	1,370	-	1	5	-	-	-	-
Wyoming.....	-	9	77	133	-	1	5	-	-	-	-
Colorado.....	-	53	1,436	1,130	-	10	37	-	-	-	52
New Mexico.....	-	10	562	1,063	-	3	10	-	-	-	-
Arizona.....	-	13	935	5,093	-	4	8	-	-	-	33
Utah.....	-	5	327	517	-	4	-	-	-	-	3
Nevada.....	-	-	269	39	-	2	4	-	-	-	-
PACIFIC.....	7	116	11,786	19,020	4	275	459	-	-	-	196
Washington.....	-	10	5,366	3,389	-	24	35	-	-	-	22
Oregon.....	-	19	1,488	1,448	-	24	29	-	-	-	12
California.....	7	86	4,681	13,883	4	216	376	-	-	-	161
Alaska.....	-	1	125	191	-	9	15	-	-	-	1
Hawaii.....	---	---	126	109	---	2	4	---	---	-	---
Puerto Rico.....	-	40	1,957	2,283	-	9	8	-	-	-	1

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
JULY 1, 1967 AND JULY 2, 1966 (26th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1967	1967	Cum. 1967	1967	Cum. 1967	1967	Cum. 1967	1967	Cum. 1967	1967	Cum. 1967
UNITED STATES...	4,952	5	90	8	75	6	188	10	90	63	2,297
NEW ENGLAND.....	807	1	1	-	-	-	2	-	-	2	55
Maine.....	8	-	-	-	-	-	-	-	-	1	14
New Hampshire.....	21	-	-	-	-	-	-	-	-	1	32
Vermont.....	33	-	-	-	-	-	-	-	-	-	7
Massachusetts.....	161	1	1	-	-	-	2	-	-	-	1
Rhode Island.....	44	-	-	-	-	-	-	-	-	-	1
Connecticut.....	540	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	344	-	7	-	-	1	20	-	13	1	43
New York City.....	7	-	3	-	-	1	10	-	-	-	-
New York, Up-State.	310	-	1	-	-	-	6	-	4	1	34
New Jersey.....	NN	-	1	-	-	-	2	-	5	-	-
Pennsylvania.....	27	-	2	-	-	-	2	-	4	-	9
EAST NORTH CENTRAL...	248	-	10	1	9	-	11	2	7	7	225
Ohio.....	50	-	1	-	-	-	4	-	4	-	87
Indiana.....	27	-	2	1	2	-	1	-	1	2	38
Illinois.....	56	-	5	-	7	-	1	2	2	4	51
Michigan.....	68	-	2	-	-	-	4	-	-	1	20
Wisconsin.....	47	-	-	-	-	-	1	-	-	-	29
WEST NORTH CENTRAL...	200	1	6	-	14	1	6	-	1	24	527
Minnesota.....	2	-	2	-	-	-	1	-	-	3	99
Iowa.....	39	-	-	-	1	-	2	-	-	2	62
Missouri.....	17	-	3	-	4	1	1	-	1	4	105
North Dakota.....	56	-	-	-	-	-	-	-	-	4	91
South Dakota.....	28	1	1	-	1	-	-	-	-	1	71
Nebraska.....	56	-	-	-	-	-	1	-	-	4	36
Kansas.....	2	-	-	-	8	-	1	-	-	6	63
SOUTH ATLANTIC.....	537	1	20	-	7	2	19	4	32	9	303
Delaware.....	10	-	-	-	-	-	-	-	-	-	-
Maryland.....	139	-	-	-	-	-	2	2	7	-	-
Dist. of Columbia..	7	-	-	-	-	-	1	-	-	-	-
Virginia.....	114	-	4	-	-	1	3	2	9	2	150
West Virginia.....	158	-	-	-	1	-	1	-	-	2	51
North Carolina.....	7	1	6	-	-	-	2	-	12	-	3
South Carolina.....	-	-	1	-	2	1	4	-	3	-	-
Georgia.....	3	-	3	-	3	-	2	-	1	4	66
Florida.....	99	-	6	-	1	-	4	-	-	1	33
EAST SOUTH CENTRAL...	788	-	17	-	7	1	28	3	16	9	479
Kentucky.....	24	-	-	-	1	-	13	1	6	5	104
Tennessee.....	638	-	8	-	4	-	5	2	6	4	339
Alabama.....	63	-	7	-	-	-	6	-	4	-	34
Mississippi.....	63	-	2	-	2	1	4	-	-	-	2
WEST SOUTH CENTRAL...	488	1	15	7	28	-	22	1	9	5	468
Arkansas.....	-	-	4	5	13	-	7	-	1	-	64
Louisiana.....	2	-	3	1	3	-	11	-	-	-	39
Oklahoma.....	27	-	-	1	9	-	-	1	6	-	142
Texas.....	459	1	8	-	3	-	4	-	2	5	223
MOUNTAIN.....	865	-	-	-	7	-	15	-	6	2	73
Montana.....	22	-	-	-	1	-	1	-	-	-	-
Idaho.....	34	-	-	-	-	-	-	-	-	-	-
Wyoming.....	1	-	-	-	2	-	-	-	-	-	4
Colorado.....	604	-	-	-	1	-	11	-	6	-	8
New Mexico.....	142	-	-	-	-	-	-	-	-	1	22
Arizona.....	33	-	-	-	-	-	3	-	-	-	36
Utah.....	29	-	-	-	3	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	1	3
PACIFIC.....	675	1	14	-	3	1	65	-	6	4	124
Washington.....	96	-	-	-	2	-	-	-	1	-	-
Oregon.....	43	-	1	-	-	-	-	-	-	-	1
California.....	520	1	11	-	1	1	62	-	5	4	123
Alaska.....	16	-	-	-	-	-	-	-	-	-	-
Hawaii.....	---	---	2	---	-	---	3	---	-	---	-
Puerto Rico.....	1	1	8	-	-	-	4	-	-	-	20

Week No. 26

DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED JULY 1, 1967

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over		
NEW ENGLAND:	759	449	35	59
Boston, Mass.	259	134	11	30
Bridgeport, Conn.	40	25	9	2
Cambridge, Mass.	22	16	-	-
Fall River, Mass.	23	15	-	1
Hartford, Conn.	68	40	1	4
Lowell, Mass.	30	20	3	1
Lynn, Mass.	19	13	-	-
New Bedford, Mass.	20	13	-	1
New Haven, Conn.	62	34	1	4
Providence, R. I.	74	45	-	5
Somerville, Mass.	9	7	-	-
Springfield, Mass.	44	31	3	6
Waterbury, Conn.	41	26	-	2
Worcester, Mass.	48	30	7	3
MIDDLE ATLANTIC:	3,088	1,807	101	170
Albany, N. Y.	36	20	-	4
Allentown, Pa.	25	17	-	1
Buffalo, N. Y.	137	71	6	9
Camden, N. J.	36	20	-	3
Elizabeth, N. J.	29	17	2	4
Erie, Pa.*	40	25	2	2
Jersey City, N. J.	78	46	3	6
Newark, N. J.	120	47	6	40
New York City, N. Y.	1,504	888	47	52
Paterson, N. J.	33	21	3	1
Philadelphia, Pa.	470	269	5	18
Pittsburgh, Pa.	203	125	5	10
Reading, Pa.	53	38	1	1
Rochester, N. Y.	102	67	11	10
Schenectady, N. Y.	26	21	2	-
Scranton, Pa.	34	19	2	-
Syracuse, N. Y.	65	28	1	5
Trenton, N. J.	44	26	3	2
Utica, N. Y.	25	19	2	1
Yonkers, N. Y.	28	23	-	1
EAST NORTH CENTRAL:	2,557	1,378	67	186
Akron, Ohio	65	37	-	2
Canton, Ohio	35	17	2	5
Chicago, Ill.	709	377	19	46
Cincinnati, Ohio	184	106	4	12
Cleveland, Ohio	196	99	2	12
Columbus, Ohio	101	50	3	9
Dayton, Ohio	82	47	4	5
Detroit, Mich.	363	193	10	22
Evansville, Ind.	45	26	2	1
Flint, Mich.	55	23	1	2
Fort Wayne, Ind.	37	15	2	5
Gary, Ind.*	33	18	2	3
Grand Rapids, Mich.	59	36	2	4
Indianapolis, Ind.	125	67	1	5
Madison, Wis.	33	15	-	1
Milwaukee, Wis.	153	72	3	34
Peoria, Ill.	31	18	-	3
Rockford, Ill.*	31	15	2	4
South Bend, Ind.	40	26	2	2
Toledo, Ohio	129	90	2	8
Youngstown, Ohio	51	31	4	1
WEST NORTH CENTRAL:	844	487	31	49
Des Moines, Iowa	69	48	1	5
Duluth, Minn.	25	15	-	1
Kansas City, Kans.	53	30	6	4
Kansas City, Mo.	125	83	4	7
Lincoln, Nebr.	28	20	-	1
Minneapolis, Minn.	118	69	1	7
Omaha, Nebr.	68	37	-	7
St. Louis, Mo.	231	119	10	12
St. Paul, Minn.	74	35	1	2
Wichita, Kans.	53	31	8	3
SOUTH ATLANTIC:	1,093	565	37	75
Atlanta, Ga.	126	59	3	6
Baltimore, Md.	225	116	6	18
Charlotte, N. C.	43	21	1	3
Jacksonville, Fla.	49	24	2	4
Miami, Fla.	110	64	-	1
Norfolk, Va.	42	19	-	2
Richmond, Va.	68	36	1	2
Savannah, Ga.	29	15	3	1
St. Petersburg, Fla.	83	71	5	-
Tampa, Fla.	71	42	6	1
Washington, D. C.	196	78	8	33
Wilmington, Del.	51	20	2	4
EAST SOUTH CENTRAL:	581	289	34	44
Birmingham, Ala.	98	44	-	7
Chattanooga, Tenn.	44	27	6	1
Knoxville, Tenn.	44	28	7	2
Louisville, Ky.*	116	59	12	8
Memphis, Tenn.	129	62	5	15
Mobile, Ala.	33	13	3	-
Montgomery, Ala.	43	21	-	5
Nashville, Tenn.	74	35	1	6
WEST SOUTH CENTRAL:	1,084	563	33	79
Austin, Tex.	27	16	1	2
Baton Rouge, La.	20	10	-	5
Corpus Christi, Tex.	30	19	-	2
Dallas, Tex.	134	69	4	4
El Paso, Tex.	51	26	3	9
Fort Worth, Tex.	68	35	2	6
Houston, Tex.	198	96	4	10
Little Rock, Ark.	46	23	3	2
New Orleans, La.	181	87	5	15
Oklahoma City, Okla.	84	40	-	4
San Antonio, Tex.	133	76	7	12
Shreveport, La.	50	28	2	5
Tulsa, Okla.	62	38	2	3
MOUNTAIN:	389	214	15	30
Albuquerque, N. Mex.	41	25	4	2
Colorado Springs, Colo.	12	8	1	-
Denver, Colo.	113	49	4	15
Ogden, Utah	24	14	1	3
Phoenix, Ariz.	89	50	4	5
Pueblo, Colo.	22	18	-	1
Salt Lake City, Utah	48	26	-	2
Tucson, Ariz.	40	24	1	2
PACIFIC:	1,580	922	32	60
Berkeley, Calif.	12	7	-	1
Fresno, Calif.	50	24	-	3
Glendale, Calif.	39	25	-	1
Honolulu, Hawaii	52	17	1	5
Long Beach, Calif.	56	26	-	2
Los Angeles, Calif.	497	305	11	15
Oakland, Calif.	97	60	1	2
Pasadena, Calif.	39	31	-	1
Portland, Oreg.	150	88	4	8
Sacramento, Calif.	60	26	4	5
San Diego, Calif.	82	52	-	3
San Francisco, Calif.	172	96	5	4
San Jose, Calif.	37	20	1	3
Seattle, Wash.	143	79	4	5
Spokane, Wash.	47	34	-	1
Tacoma, Wash.	47	32	1	1
Total	11,975	6,674	385	752

*Estimate - based on average percent of divisional total.

Cumulative Totals
including reported corrections for previous weeks

All Causes, All Ages	329,048
All Causes, Age 65 and over	189,420
Pneumonia and Influenza, All Ages	12,327
All Causes, Under 1 Year of Age	16,609

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 17,000, IS PUBLISHED AT THE NATIONAL COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA.

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THE EDITOR
MORBIDITY AND MORTALITY WEEKLY REPORT
NATIONAL COMMUNICABLE DISEASE CENTER
ATLANTA, GEORGIA 30333

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE NCDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL
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